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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/786,012	02/26/2001	Jong Seob Kim	PI-120	6950

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EXAMINER

MERCADO, JULIAN A

ART UNIT	PAPER NUMBER
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1745

DATE MAILED: 07/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

AS9

Office Action Summary

Application No.

09/786,012

Applicant(s)

KIM ET AL.

Examiner

Julian A. Mercado

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 May 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

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DETAILED ACTION

Remarks

This Office Action is responsive to applicant's amendment filed May 21, 2003.

The rejection of claims 1, 3 and 4 under 35 U.S.C. 102(b), and the rejection of claims 5 and 6 under 35 U.S.C. 103(a), based on Hamamoto et al. has been withdrawn. Receipt is acknowledged of an English-language translation of the Korean 99-26358 application to which applicant claims foreign priority, thereby obviating the Hamamoto et al. reference as prior art.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 1 is rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for an "11.1 FB: 88.9 CE" ratio when both instant formulas 2 and 3 are present, does not reasonably provide enablement for this ratio when "one or more compounds represented by... formulas 2 and 3" are present, i.e. when only one of either formulas 2 and 3 is present. (see independent claim 1) The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims. The examiner notes Example 2 of the specification which was pointed out by applicant as support for the present amendment. However, as found in Table 2, a ratio of 11.1 FB to 88.9 CE requires *both* EC and DMC present in the solvent system. (emphasis

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added) At present, applicant's independent claim 1 recites "one or more compounds" while Example 2 of the specification requires both Formula 1, e.g. DMC and Formula 2, e.g. EC present.

The other Examples 1 and 3-15 have also been considered but do not enable a ratio of 11.1 FB to 88.9 CE, i.e. 1 part FB to 8 parts CE.

For similar reasons, new claim 7 recites a ratio of "12.5 FB: 87.5 CE" which is noted to correspond to a ratio of 1 part FB to 7 parts CE. Example 6 of the specification appears to support such a ratio, however, as discussed above, in view of Example 6 both EC, DMC and DEC are required to be claimed and therefore both Formula 1 and Formula 2 require to be positively recited in the claim.

Claims 5 and 6 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a volume ratio of formula 1 to the solvent component of the general formula 2 or formula 3 at a ratio of "1/4" (see Example 2), does not reasonably provide enablement for a ratio of "1/8". The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims.

Claim 8 is rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a volume ratio of formula 1 to the solvent component of the general formula 2 at a ratio of "2/1" (see Example 4), does not reasonably provide enablement for a ratio of "1/7". The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with this claim.

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Claim 9 is rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a volume ratio of formula 1 to the solvent component of the general formula 3 at a ratio of "2/1" (see Example 4), does not reasonably provide enablement for a ratio of "1/7". The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with this claim.

Claims 2-9 are rejected under 35 U.S.C. 112, first paragraph as being dependent upon a rejected base claim.

Claim Rejections - 35 USC § 102 and 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-7 and 9 are rejected under 35 U.S.C. 102(b) as anticipated by Kita et al., or, in the alternative, under 35 U.S.C. 103(a) as obvious over either Kita et al. in view of the Merck Chemical Database.

The rejection is maintained for the reasons of record and for the additional reasons to follow in view of applicant's present amendment and in response to applicant's salient arguments.

As discussed in the prior Office Action, Kita teaches a preferred wt. % of the fluorobenzene to range from 0.1 to 10 wt.%. (Abstract) The examiner notes that the scope of the present claims recite a volume percent ratio. To that extent, the Merck Chemical Database was relied upon to show the conversion of wt. % to volume percent. In Kita et al., the disclosed 10

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wt. % of fluorobenzene corresponds to 9.7 vol.% fluorobenzene relative to 84% or 59.7% of dimethyl carbonate or ethylene carbonate, respectively. The 35 U.S.C. 112, first paragraph issues discussed above notwithstanding, the resulting ratios are 11.5% and 16.2% which are comfortably within Applicant's claimed range of 11.1 % to 50%. The latter value of 16.2% reads on the instant ratio of 12.5 % to 50% (applies to new dependent claim 7) and the instant ratio of 12.5% to 66%. (applies to new dependent claim 9).

In view of the foregoing, a disclosed wt. % of the fluorobenzene component in Kita et al. would naturally flow to inherently have the same volume ratio as claimed, absent of a showing by applicant that the claimed invention distinguishes over this reference. *In re Best* and *In re Spada*, 15 USPQ 2d 1655 (Fed. Cir. 1990) In the alternative, calculation of the volume ratio of fluorobenzene based on its disclosed wt. % is maintained obvious to the skilled artisan as demonstrated herein.

Response to Arguments

Applicant's arguments have been fully considered, however they are not persuasive.

Applicant submits that Kita et al. uses less than 10% of fluorobenzene and hence is not within the ranges of the present invention. It appears to the examiner however that applicant is interpreting this "10% of fluorobenzene" teaching by Kita et al. only as an absolute value and with no consideration of the units that this value actually represents. Kita et al. teaches a range of 0.1 to 10 *weight %* (emphasis added), and 10 weight % equals a *volume %* (emphasis added) of 9.7 which, when taken as a ratio relative to the dimethyl carbonate (DMC) or ethylene carbonate (EC) volume %, equals a *volume percent ratio range* of 11.1% or 16.2%. (emphasis

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added) Applicant is indeed correct that Kita et al. uses 10% or less of fluorobenzene, but this argument is limited solely to the weight % of the fluorobenzene. Kita et al. is maintained to teach the instant invention to the extent that a 10 weight % of fluorobenzene, corresponding to 9.7 volume % and hence an 11.5% or 16.2% ratio with DMC or EC, overlaps with applicant's claimed volume percent ratio range of 11.1% to 50%.

Arguments against Hamamoto et al. is deemed moot, as the ground of rejection based on this reference has been withdrawn.

Arguments against the Merck Chemical Database appear to be directed to this reference failing to remedy alleged differences between Kita et al. and the present claims. However, in view of Kita et al. being maintained for the reasons discussed above, the rejection in view of the Merck Chemical Database is subsequently maintained for the reasons discussed in the previous Office Action.

Conclusion

The prior art relied upon in this Office Action will not be provided, since it is the same prior art presently of record.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period

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will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julian A. Mercado whose telephone number is (703) 305-0511. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan, can be reached on (703) 308-2383. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

jam
July 22, 2003


Patrick Ryan
Supervisory Patent Examiner
Technology Center 1700